WHAT IS CLAIMED IS:

1. A method of manufacturing a spacer assembly, which has a substrate and a plurality of columnar spacers provided on the substrate and is used in a flat display device, comprising:

preparing the substrate and a molding die having a plurality of through holes;

forming an organic coating film by applying a parting agent at least to the respective inner surfaces of the through holes of the molding die, the parting agent containing an organic component which is dissipated by being decomposed or burned by heating at a given temperature;

locating the molding die on the surface of the substrate so as to be intimately in contact therewith and then filling a spacer forming material into the through holes of the molding die;

curing the filled spacer forming material and then heating the substrate and the molding die at a first temperature to decompose or burn at least the organic coating film on the respective inner surfaces of the through holes of the molding die, thereby removing the organic coating film;

parting the molding die from the substrate after the organic coating film is removed;

heating the spacer forming material at a second temperature higher than the first temperature, thereby

removing a binder from the spacer forming material, after the molding die is parted; and

firing the spacer forming material at a third temperature higher than the first and second temperatures, thereby forming the spacers integrally on the substrate, after the binder removing process.

2. A method of manufacturing a spacer assembly according to claim 1, wherein the spacer forming material used is a spacer forming material consisting mainly of a glass filler and an ultraviolet-curing, thermosetting, or ultraviolet-curing/thermosetting organic component such that the substrate and the molding die are heated at the first temperature to remove at least the organic coating film on the respective inner surfaces of the through holes of the molding die after the spacer forming material is cured by being irradiated with ultraviolet rays, after the spacer forming material is cured at a temperature lower than the first temperature, or after at least some of the spacer forming material is cured by being irradiated with ultraviolet rays with the remainder cured thereafter at a temperature lower than the first temperature.

3. A method of manufacturing a spacer assembly according to claim 1, wherein the parting agent used is a parting agent consisting mainly of an organic component which is decomposed or burned at a lower

temperature than the organic component of the cured spacer forming material is.

4. A method of manufacturing a spacer assembly according to claim 1, wherein the diameter of each spacer is adjusted by regulating the thickness of the organic coating film.

5. A method of manufacturing a spacer assembly according to claim 1, wherein the substrate used is a metallic substrate coated with an oxide film.

6. A method of manufacturing a spacer assembly, which has a plate-shaped grid having a number of beam passage apertures and a plurality of columnar spacers provided integrally on the grid and is used in a flat display device, comprising:

preparing the plate-shaped grid having first and second surfaces and a plurality of spacer apertures situated individually between the beam passage apertures;

preparing first and second plate-shaped molding dies having a plurality of through holes each;

forming organic coating films individually by applying a parting agent at least to the respective inner surfaces of the through holes of the first and second molding dies, the parting agent containing an organic component which is dissipated by being decomposed or burned by heating at a given temperature;

locating the first and second molding dies on the

first and second surfaces, respectively, of the grid so as to be intimately in contact therewith and so that the spacer apertures of the grid and the through holes of the first and second molding dies are in alignment with one another and then filling the spacer forming material into the through holes of the first and second molding dies and the spacer apertures;

curing the filled spacer forming material and then heating the grid and the first and second molding dies at a first temperature to decompose or burn at least the organic coating films on the respective inner surfaces of the through holes of the first and second molding dies, thereby dissipating the organic coating films, and parting the first and second molding dies from the grid thereafter;

heating the spacer forming material at a second temperature higher than the first temperature, thereby removing a binder from the spacer forming material, after the first and second molding dies are parted; and

firing the spacer forming material at a third temperature higher than the first and second temperatures, thereby forming the spacers integrally on the first and second surfaces of the grid, after the binder removing process.

7. A method of manufacturing a spacer assembly according to claim 6, wherein the spacer forming material used is a spacer forming material consisting

mainly of a glass filler and an ultraviolet-curing, thermosetting, or/and ultraviolet-curing/thermosetting organic component such that the substrate and the molding die are heated at the first temperature to dissipate at least the organic coating films on the respective inner surfaces of the through holes of the molding die after the spacer forming material is cured by being irradiated with ultraviolet rays, after the spacer forming material is cured at a temperature lower than the first temperature, or after at least some of the spacer forming material is cured by being irradiated with ultraviolet rays with the remainder cured thereafter at a temperature lower than the first temperature.

8. A method of manufacturing a spacer assembly according to claim 6, wherein the parting agent used is a parting agent consisting mainly of an organic component which is decomposed or burned at a lower temperature than the organic component of the cured spacer forming material is.

9. A method of manufacturing a spacer assembly according to claim 6, wherein the diameter of each spacer is adjusted by regulating the thickness of the organic coating films.

10. A method of manufacturing a spacer assembly according to claim 6, wherein the grid used is a grid formed of a metal sheet having an oxide film on the

surface thereof.

11. A method of manufacturing a spacer assembly, which has a plate-shaped grid having a number of beam passage apertures and a plurality of columnar spacers provided on the grid and is used in a flat display device, comprising:

preparing the plate-shaped grid having first and second surfaces;

preparing first and second plate-shaped molding dies having a plurality of through holes each;

forming organic coating films individually by applying a parting agent at least to the respective inner surfaces of the through holes of the first and second molding dies, the parting agent containing an organic component which is dissipated by being decomposed or burned by heating at a given temperature;

locating the first molding die on the first surface of the grid so as to be intimately in contact therewith and then filling a spacer forming material into the through holes of the first molding die;

curing the spacer forming material filled into the through holes of the first molding die;

locating the second molding die on the second surface of the grid so as to be intimately in contact therewith and then filling the spacer forming material into the through holes of the second molding die;

curing the spacer forming material filled into the

through holes of the second molding die;

heating the grid and the first and second molding dies at a first temperature to decompose or burn at least the organic coating films on the respective inner surfaces of the through holes of the first and second molding dies, thereby dissipating the organic coating films, after the spacer forming material is cured and parting the first and second molding dies from the grid thereafter;

heating the spacer forming material at a second temperature higher than the first temperature, thereby removing a binder from the spacer forming material, after the first and second molding dies are parted; and

firing the spacer forming material at a third temperature higher than the first and second temperatures, thereby forming the spacers integrally on the first and second surfaces of the grid, after the binder removing process.

12. A method of manufacturing a spacer assembly according to claim 11, wherein the grid used is a grid formed of a metal sheet having an oxide film on the surface thereof.